



# Nurse's Knowledge Associated with the Routine Essential Newborn Care after Birth in Baghdad City

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**Abstract** The care given to newborns immediately within the first few hours of birth is critical for their survival. The neonatal period transitional period, immediately after birth, and it is critical for their survival and existence. Essential newborn care is one of the significant strategies for neonatal survival, especially immediately after delivery. Pediatric Nurses are the key healthcare providers who care for neonates immediately after birth. **Aim:** Aim of the study was to assess Nurse's Knowledge Associated with the Routine Essential Newborn Care after birth in Baghdad City. A descriptive design was utilized for this study. **Setting** The study was carried out at Al-Elwiya Maternity Teaching and the Private Nursing Home Hospitals in Baghdad city. **Sample:** A purposive sample consisted of 60 participants (Pediatric/ midwives nurses) according to inclusion criteria. **Tools:** The questionnaire was constructed and developed and include two parts: the first part includes A structured Nurses demographic characteristics Sheet, and the second part includes for nurses' knowledge about immediate of the newborn care. **Results:** The results of the present study indicated that 45 (75.0%) of nurses had fair knowledge and (10%) had good knowledge, only (15.0%) of them had poor knowledge. **Conclusion:** According to the findings of the present study, the study concluded that only 10 % of nurses has good knowledge of routine essential newborn care after birth. And the socio-demographic characteristics of nurses' have no effect on their knowledge, exception of years of experience working in the delivery room which has a significant effect on the level of pediatric/midwives nurses' knowledge. **Recommendation:** Replication of the study on large samples of pediatric/ midwives nurses nurses. Also, Education program for pediatric/ midwives nurses about immediate newborn care to improve their knowledge and practice.

**Key Words** Pediatric/midwives nurses Nurse's Knowledge, Immediate Care, Newborn

## 1. Introduction

A newborn is an infant who is within hours, days, or up to a few weeks from birth or it refers to an infant in the first 28 days of life. The day of birth is the riskiest time to a newborn. Neonatal mortality is among major public health problems in developing nations. Newborns are very vulnerable to disease in the first week of life, where large numbers of newborns die soon after birth. An newborn is about 500 times more likely to die on the first day of life than at one month of age [1].

The birth of a newborn is a miraculous moment in life that requires immediate care for the newborn. Despite the advancement in child survival actions such as vaccination and programs for diarrhea control, developing countries still suffer from a high newborn mortality rate [2].

Essential new-born care is one of the significant strategies recommended by the WHO to promote the well-being of

neonatal and prevent preventable neonatal deaths which usually happen within the first few days of life after birth. WHO delineates Essential New-born Care (ENC) as an all-inclusive strategy developed to strengthen the new-borns health by making interventions before pregnancy, during pregnancy, soon after birth, and during postnatal.

Knowledge is the fundamental aspect of every health care organization. to devotion to necessary of immediate newborn care. At hospital-based level resuscitation is the first step for the prevention of complication in newborn. After birth, immediate newborn care begins in the delivery room, with pediatric or midwives nurses conducting a quick physical assessment of the newborn's condition. The APGAR scoring assessment that used to evaluate a newborn's condition within the first minute after birth [3].

Essential newborn care (ENC) is one of the significant

strategies for neonatal survival, especially immediately after delivery. Nurses and midwives are the key healthcare providers who care for neonates immediately after birth, their knowledge and skills on ENC are very important for the preventable causes of neonatal deaths [4].

Essential new-born care is one of the significant strategies recommended by the WHO to promote the well-being of neonatal and prevent preventable neonatal deaths which usually happen within the first days after birth. WHO delineates Essential New-born Care (ENC) as an all-inclusive strategy developed to strengthen the new-born infant health soon after birth. The availability of skilled pediatric nurses and/or midwives nurses to provide ENC prevents 75% of new-born deaths during delivery and postnatal period, respectively [5].

Essential newborn care has standardized and active practical steps: drying and motivating, evaluating breathing, care of umbilical cord, protection the newborn warm (preventing hypothermia), starting breastfeeding within the first hour, managing eye drops / eye ointment, administering vitamin K intramuscularly, newborn identification straps, weighing the newborn, when stable and warm, write all notes and treatments, delay bathing the baby for 24 hours after birth [6].

Essential Newborn Care (ENC) is a universal approach aimed at improving the health of newborn before conception, though pregnancy, during and shortly after birth, and in the postnatal period, immediate newborn care is apart from ENC, it the first sixty to ninety minute after birth [7].

Essential newborn care (ENC) is a holistic approach designed through interventions to enhance the health of newborns. It involves essential preventive newborn treatment such as control of temperature, care of the eyes and cords, and early and exclusive breastfeeding; administration of vitamin K, immunization, and early identification of problems or indications of risk [8].

## 2. Significant of the Study

Neonatal mortality is the most imperative public health problem worldwide affecting disproportionately poor-income countries. Worldwide, significant progress has been done in controlling under-five children's mortality rate [9].

Credibly, neonatal mortality in 2000; 31 per 1000 live births declined to 18 per 1000 live births in 2018 [9]. Likewise, recent reports of [10] revealed that worldwide, 2.4 million neonates died before the completion of their first month of birth with an estimated 6500 neonatal deaths every day [11].

The current infant mortality rate for Iraq in 2023 is 21.137 deaths per 1000 live births, a 2.73% decline from 2022. The infant mortality rate for Iraq in 2022 was 21.731 deaths per 1000 live births, a 2.66% decline from 2021. Newborn is considered to be small and incapable, totally dependent on other for lifetime; within one minute of labor the normal new born baby adjusts from a reliant on serious lifespan to an independent one; ready to breathing and carriage on life route. Newborn care is crucial [12].

## 3. Aim of the Study

This study aimed to assess the nurse's knowledge associated with the routine essential newborn care after birth in Baghdad city.

## 4. Subject and Methods

### A. Research Design

A descriptive research design was conducted from 1st October 2022 to the end of December 2022.

### B. Setting

The study was conducted at Al-Elwiya Maternity Teaching and the Private Nursing Home Hospitals in Baghdad city.

### C. Sample and Sample Size

A purposive sample consisted of 60 pediatric / midwives nurses were selected from the previously mentioned settings.

### D. Tools for Data Collection

The study tools for data collection include the following four tools:

#### 1) A structured Interviewing Questionnaire Sheet

The study instrument consists of two parts; **Part I:** Nurses demographic characteristics. It is concerned with studied sample characteristics including nurses' age, gender, level of education and participated in training courses on immediate newborn care.

**Part II:** Nurse's knowledge associated with the routine essential newborn care after birth as (newborn period, APGAR Score, cord care, first bath, . . . . . And eye treatment) .

This part of questionnaire format comprised of a multi choices questions fourteen items concerning the nurses' knowledge about immediate newborn care. Two points for the true answer and one point for the false answer. The total score ranged from a maximum score of twenty eight to a minimum zero with the higher score indicated of a more complete knowledge.

### E. Statistical Data Analysis

The data of the present study were analyzed by using the statistical package of social sciences (SPSS) version 24.

### F. Ethical Consideration

In the beginning, the researcher individually interviewed the nurses in the previously mentioned setting and introduced herself, explained the purpose of the study, and gave a clear and brief idea about it. The nurse's verbal consent was obtained and informed them that they have the right to withdraw from the study at any time without giving any reason. They were also assured that anonymity and confidentiality will be guaranteed, as well the collected data will be used for the research purpose only. Ethics, values, culture, and beliefs were respected.

### G. Pilot Study

A pilot study was conducted on pediatric / midwives nurses, which represented 10% of the total sample, to test the clarity and applicability of the tools and to calculate the required time to fill out the forms. Some modifications and clarifications of some questions were done accordingly. Pilot study nurses were included in the main study sample.

### H. Content Validity

The study assessment tools were submitted to a panel of three experts in the field of pediatric nursing to examine the content validity (covering, clarity, wording, length, format, and overall appearance). A slight modification has been made.

### I. Tools' Reliability

The actual field work takes two months, starting from October 2022 up to the end of December 2022. The researcher was available in the study setting two days per week (Sunday and Thursday) during the morning shift. Each interviewing questionnaire was filled in, in the presence of the researchers.

Data were analyzed using SPSS version 20. Numerical data were expressed as mean  $\pm$  SD and range. Qualitative data were expressed by frequency and percentage. The relations between different numerical variables were tested using Pearson's correlation. as well as, the Chi square test. A probability level of  $<0.05$  was adopted as a level of significance and less than 0.001 was considered a highly significant.

## 5. Results

Table 1 shows that the highest percentage of the study sample within age groups of (21-30) which represented (65%), (63.0%) were married, (42.0%) of the study sample were graduates from secondary school, (40%) have (11-15) years' experience of working in the maternity unit, and (33%) have (1-5) and (35%) have (6-10) year experience of working in delivery room, and (80%) of study sample participated in training courses on immediate newborn care.

Table 2 illustrated that nurses' knowledge about immediate newborn care in general are at fair level with grand mean (1.508  $\pm$  .145).

Table 3 represented the distribution of nurses' knowledge indicate that most of the study sample represents fair knowledge and accounted for 44(75.5%) and 9 (15.0%) represents poor knowledge, while 6 (10%) represent good knowledge about immediate neonatal care.

Table 4 revealed that there is no statistically significant relationship between sociodemographic characteristics and nurses' knowledge about immediate newborn care, with the exception of years of experience working in the delivery room which has a significant effect on the level of nurses' knowledge.

## 6. Discussion

The present study included a group of 60 Iraqi pediatric/ midwives nurses with a mean age of (31.896 $\pm$ 8.75) years, and revealed that the dominant age group of the study sample

is within (21 and 30) years old of age group (Table 1). This result is supported by [12], who reported that the majority of Nurses who reported that mean age is 34-9.935 years in which 40% of them are associated with age group 20-29 years. Also, this finding is similar to a study conducted by [7], who reported that mean age of the participants were 37.18 years old.

In relation to the experience of pediatric nurses working in the delivery room, the present study findings revealed that most of the sample (1-5) and (6-10) years and accounted (33%, 35%) respectively. This result supported by [12] reported that highest percentage within 6-10 years among 48% of nurse- midwives and 20% have 1-5 years of experience.

Totally, the result of the current study revealed that the overall knowledge of nurses about immediate newborn care was fair (Table 2). Also, the distribution of the nurses according to assessment level showed that majority of nurses that had fair knowledge represented three quarter of the study sample (75.0%), and 15.0% of the sample had poor knowledge in The findings and evaluation of the nurse's knowledge in the present study, lead to consider nurses' responses as unsatisfactory. This result consistent with [12] who indicated that that 74% of nurses showing fair level of knowledge during assess nurse's knowledge about immediate postpartum care.

Study [7] mentioned that participants (pediatric nurses) had different level of knowledge assessment regarding immediate newborn care, majority (38%) of study sample had moderate level of knowledge, and the same percentages (31%) had high level of knowledge, and low level of knowledge. This result is consistent with present study. Also, all nurses in delivery room have moderate level of knowledge related immediate newborn care.

The finding was revealed that the age, marital status, educational level, nursing experience working in the maternity unit, and training courses variables have no effect on pediatric/midwives nurses knowledge regarding immediate newborn care in delivery rooms among study sample, with the except of years of experience working in the delivery room which has a significant effect on the level of nurses' knowledge as shown in Table 4.

The result of current study agreed with a study in Erbil who reveals that there were no significant statistical associations between overall pediatric/midwives nurse's knowledge regarding immediate newborn and education level, experience years and training course in newborn care.

## 7. Conclusion

According to the findings of the present study concludes that what should be improving pediatric/midwives nurse's knowledge, and this will help to reduce the unacceptable performance and improve the Routine Essential Newborn Care immediately after delivery.

Variables	Characteristics	F	%
Age (years)	21-30	39	65.0
	31-40	12	20.0
	41-50	5	8.3
	51 and above	4	6.7
	Total	60	100.0
Marital status	Mean $\pm$ SD	31.896 $\pm$ 8.75	
	Single	22	37.0
	Married	38	63.0
Education level	Total	60	100.0
	Secondary school graduate	25	42.0
	Nursing institute	14	23.0
	College of nursing	21	35.0
How long have you been working in the maternity unit	Total	60	100.0
	1-5 years	3	5.0
	6-10 years	5	8.0
	11-15 years	24	40.0
	16- 20 years	12	20.0
	21 and above	16	27.0
How long have you been working in the labor, or delivery room.	Total	60	100.0
	1-5 years	19	33.0
	6-10 years	21	35.0
	11-15 years	15	25.0
	16- 20 years	3	5.0
Participated in training courses about immediate newborn care	21 and above	2	3.0
	Total	60	100.0
	Yes	48	80.0
	No	12	20.0
	Total	60	100.0

Table 1: The Socio-Demographic Characteristics of the Pediatric/Midwives Nurses' in Percentage Distribution (No. 60)

List	Knowledge items	Resp.	F	%	MS	SD	Ass.
1.	Components of immediate newborn care are including the following except	Incorrect	50	83.3	1.25	.345	Poor
		Correct	10	16.7			
2.	The newborn period from	Incorrect	36	60.0	1.34	.511	Fair
		Correct	24	40.0			
3.	The immediate care of newborn is care of the baby that needs to be given at	Incorrect	44	73.3	1.56	.523	Fair
		Correct	16	26.7			
4.	which of the following is correct about Apgar scoring	Incorrect	28	46.7	1.76	.472	Fair
		Correct	32	53.3			
5.	Care of neonate at birth include the following except:	Incorrect	46	76.7	1.53	.523	Fair
		Correct	14	23.3			
6.	if baby breathing well, clamp and cut the umbilical cord after	Incorrect	40	66.7	1.44	.492	Fair
		Correct	20	33.3			
7.	Newborns without complications should be kept in skin-to-skin contact with their mothers	Incorrect	36	60.0	1.62	.513	Fair
		Correct	24	40.0			
8.	During the first hour should skin-skin care be interrupted	Incorrect	46	76.7	1.39	.501	Fair
		Correct	14	23.3			
9.	In neonates born through meconium-stained amniotic fluid who do not start breathing on their own	Incorrect	39	65.0	1.42	.475	Fair
		Correct	21	35.0			
10.	How should keeping the newborn warm	Incorrect	11	18.3	1.79	.396	Good
		Correct	49	81.7			
11.	During the first hour after birth, how should the meconium on the baby's skin be removed	Incorrect	14	23.3	1.83	.432	Good
		Correct	46	76.7			
12.	When should a baby be first bathed	Incorrect	44	73.3	1.33	.463	Poor
		Correct	16	26.7			
13.	How often should healthy babies feed	Incorrect	39	65.0	1.42	.489	Fair
		Correct	21	35.0			
14.	When should initial eye treatment be given	Incorrect	36	60.0	1.39	.489	Fair
		Correct	24	40.0			
Grand mean of score					1.5036	.139	Fair

F.: frequency, %: percentage, SD: Standard Deviation, MS: mean of score, Ass.: Assessment by MS: (1 – 1.33) Poor; (1.34-1.66) Fair; (1.67– 2) Good

Table 2: Distribution of Pediatric/Midwives Nurse's Knowledge Associated with the Routine Essential Newborn Care after Birth (No. 60)

Variables	Level of Assessment	Frequency	Percent
Knowledge	Poor	9	15
	Fair	45	75
	Good	6	10.0
	Total	60	100.0

Table 3: Distribution of Pediatric/Midwives Nurse's Level of Knowledge Associated with the Routine Essential Newborn Care after Birth (No. 60)

Sociodemographic variables		Level of Assessment				Pearson Chi-Square	Sig. (2-sided)
		Poor	Fair	Good	Total		
Age group in years	21-30	6	31	2	39	5.358	0.499 NS
	31-40	1	10	1	12		
	41-50	0	4	1	5		
	51 and above	0	2	2	4		
	Total	7	47	6	60		
Marital status	Single	2	18	2	22	1.18	0.554 NS
	Married	8	24	6	38		
	Total	10	42	8	60		
Educational Level	Nursing	5	18	3	25	4.16	0.385 NS
	Secondary school graduate						
	Nursing Institute	1	11	2	14		
	College of Nursing	3	17	1	21		
	Total	8	46	6	60		
How long have you been working in maternity room?	1-5 years	0	3	0	3	6.594	0.581 NS
	6-10 years	0	3	2	5		
	11-15 years	2	22	0	24		
	16- 20 years	1	10	1	12		
	21 and above	2	12	2	16		
Total	5	51	4	60			
How long have you been working in the labor room.	1-5 years	1	17	1	19	18.382	0.019 S
	6-10 years	2	16	3	21		
	11-15 years	5	9	1	15		
	16- 20 years	0	2	1	3		
	21 and above	0	0	2	2		
Total	8	44	8	60			
Participated in training courses on immediate newborn care	Yes	4	38	6	48	1.129	0.569 NS
	No	2	10	0	12		
	Total	6	48	6	60		

HS: Highly significant at  $P \leq 0.01$ ; S: significant at  $\leq 0.05$ ; NS: Non significant at  $P > 0.05$ .

Table 4: Association Between Pediatric/Midwives Nurse's Knowledge Associated with the Routine Essential Newborn Care after Birth and their Socio- Demographical Characteristics (No. 60)

## 8. Recommendation

Based on the study results, the following recommendations are proposed:

- 1) Replication of the study on large samples of pediatric/midwives nurses to assess their knowledge associated with the routine essential newborn care after birth delivery at different setting in Iraq.
- 2) Education program for pediatric/midwives nurses about immediate newborn care to improve their knowledge and practice.

## Conflict of Interest

The authors declare no conflict of interests. All authors read and approved final version of the paper.

## Authors Contribution

All authors contributed equally in this paper.

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